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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/618,537	07/18/2000	Hiroshi Tanaka	49761(868)	8668

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EXAMINER	
PARK, CHAN S	

ART UNIT	PAPER NUMBER
2622	

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/618,537	TANAKA ET AL.	
	Examiner	Art Unit	
	CHAN S. PARK	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 9-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 9-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/18/00*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment was received on 5/3/05, and has been entered and made of record. Currently, **claims 1 and 9-11** are pending.

Information Disclosure Statement

2. An initialed and dated copy of Applicant's IDS form 1449, filed on 7/18/00, is attached to the instant Office action.

Response to Arguments

3. Upon review of the reference of Kawamoto (U.S. Patent No. 6,486,971), which was cited in the Office Action dated 2/7/05 under 35 U.S.C. 102 (e), as being anticipating **claims 1 and 9**, the examiner notes that the reference can still be interpreted as anticipating the claims, as currently amended.

Before discussing the cited reference, examiner notes that claims 1 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 9 recite the limitation "variable magnification processing" twice in lines 10-11. There is insufficient antecedent basis for this limitation in the claim. It is understood that there are two distinct variable magnification processes performed according to the claims, i.e., one performed by the enlarging variable magnification unit and other performed by the reducing variable magnification unit. It is uncertain as to

whether the two claimed variable magnification processing refers to two different variable magnification processes (one for reduction and other for enlargement) or one single variable magnification process. Examiner kindly suggests applicant to use the term "reducing variable-magnification" or "enlarging variable-magnification" for the clarification.

Moreover, claim 9 recites the limitation "the line memory output". There is insufficient antecedent basis for this limitation in the claim. It is uncertain as to whether this line memory output refers to the plurality of output lines. Further, it is uncertain as to whether only one of the plurality of output lines is connected in parallel to the plurality of image forming means.

As amended, claim 1 now requires "a write signal for the FIFO memory is started earlier than a read signal therefor during [the image] enlargement, and the read signal for the FIFO memory is started earlier than the write signal therefor during [the image] reduction." Kawamoto discloses an apparatus for processing image enlargement wherein image data of one line of the main scanning direction is stored in the FIFO and this stored data is read from the memory device for the enlargement process (col. 8, line 59 – col. 9, line 6). Thus, a write signal (storing signal) is started earlier than a read signal with respect to one particular line during the enlargement. Furthermore, Kawamoto discloses the apparatus for processing image reduction wherein the image data is read to be processed for the reduction and the processed (reduced) image data

is stored in the FIFO (col. 9, lines 7-12). Thus, the read signal is started earlier than the write signal with respect to one particular line during the reduction.

As amended, claim 9 now requires "wherein the line memory output is connected in parallel to the plurality of image forming images." Kawamoto discloses a controller for controlling the pulse width and the current to be given to each of the semiconductor laser elements of the laser array unit (col. 6, lines 21-25). Thus, it is noted that the output is connected to the plurality of image forming images in parallel.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., magnification ratios can be controlled by the mere on/off operation of the gates and complicated timing control for the variable magnification of image data is not necessary) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

4. Examiner previously requested the applicant to provide where in the prior art, figs. 11 and 12 are taught. Examiner respectfully requests the applicant to provide prior art references (not from the Specification) supporting/describing the drawings and the disclosure. It would greatly help examiner to better take a decision on patentability.

Claim Objections

5. Claim 1 is objected to because of the following informalities:

Line 14, insert -- the image -- between "during" and "enlargement"; and

Line 15, insert -- the image -- between "during" and "reduction".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1 and 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "variable magnification processing" twice in lines 10-11. There is insufficient antecedent basis for this limitation in the claim. It is understood that there are two distinct variable magnification processes performed according to the claims, i.e., one performed by the enlarging variable magnification unit and other performed by the reducing variable magnification unit. It is uncertain as to whether the variable magnification processing refers to two different variable magnification processes (one for reduction and other for enlargement) or one single variable

magnification processes. Examiner kindly suggests applicant to use the term "reducing variable-magnification" or "enlarging variable-magnification".

With respect to claims 9-11, arguments analogous to those presented for claim 1, are applicable.

Moreover, claim 9 recites the limitation "the line memory output". There is insufficient antecedent basis for this limitation in the claim. It is uncertain as to whether this line memory output refers to the plurality of output lines. Further, it is uncertain as to whether only one of the plurality of output lines is connected in parallel to the plurality of image forming means.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 9-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Kawamoto.

7. With respect to claim 1, Kawamoto discloses an image processing apparatus provided with a capability of carrying out variable magnification of image data, comprising:

a single FIFO memory for carrying out write/read processing of image data (col. 8, line 3-7);

an enlarging variable magnification unit for carrying out variable magnification processing following write processing and read processing of image data to and from the first-in, first-out memory during image enlargement (col. 8, line 3-7 & col. 8, line 59 – col. 9, line 6); and

a reducing variable magnification unit for writing image data to the first-in, first-out memory after variable-magnification is carried out during image reduction (col. 9, line 7-12),

wherein variable magnification processing in a scan direction is carried out independently of variable magnification processing in a sub-scan direction (col. 7, lines 10-19), and

wherein a write signal for the FIFO memory is started earlier than a read signal therefor during the image enlargement (col. 8, line 59 – col. 9, line 6), and the read signal for the FIFO memory is started earlier than the write signal therefor during the image reduction (col. 7, lines 10-19).

8. With respect to claim 9, Kawamoto discloses an image processing apparatus provided with a capability of carrying out variable magnification of image data, comprising:

a line memory (FIFO 63) for storing one line worth of data (col. 8, lines 63-64);

a plurality of image forming means (semiconductor laser elements of the laser array unit 14 in col. 6, line 23);

a plurality of output lines (lines connected to the input of the semiconductor laser elements) for connecting the line memory and the plurality of image forming means;

a plurality of switching means (LED writing head control device 37) for turning the plurality of output lines on or off individually; and

a variable-magnification processing means (enlarging/reducing process 53 in fig. 5) for increasing and decreasing the number of times to turn on the switching means in correspondence to magnification ratio, wherein variable magnification processing in scan direction is carried out independently of variable magnification processing in sub-scan direction (col. 7, lines 10-19), and

wherein the line memory output is connected in parallel to the plurality of image forming means.

Note that since the image data saved in the FIFO is transferred to the printer control 36 and the LED writing control 37 having the semiconductor laser elements for printing process, it is inherent that the FIFO is connected to the plurality of image forming means (semiconductor laser elements) directly or indirectly by plurality of output lines.

Furthermore, it should be noted that the functionality of each semiconductor laser elements depends on the image data processed by the image process device 33, which includes the enlarging/reducing process of fig. 5. Specifically referring to col. 6, lines 22-23, depending on the image data processed by the enlarging/reducing process 53, the current to be given to each of the semiconductor laser elements is controlled or switched by the LED writing control device 37. Therefore, it is inherent that when the

image is reduced, certain semiconductor laser elements turn off in certain area of the image by stopping the current, and when the image is enlarged, certain semiconductor laser elements turn on in certain area of the image by allowing the current to flow.

9. With respect to claim 10, Kawamoto discloses an image processing apparatus provided with a capability of carrying out variable magnification of image data, comprising:

a single FIFO memory for carrying out write/read processing of image data (col. 8, line 3-7);

an enlarging variable magnification unit for carrying out variable magnification processing following write processing and read processing of image data to and from the first-in, first-out memory during image enlargement (col. 8, line 3-7 & col. 8, line 59 – col. 9, line 6); and

a reducing variable magnification unit for writing image data to the first-in, first-out memory after variable-magnification is carried out during image reduction (col. 9, line 7-12), and

wherein variable magnification processing in a sub-scan direction is carried out independently of variable magnification processing in a scan direction (col. 8, line 59 – col. 9, line 6 & col. 9, line 7-12).

Note that the enlarging variable magnification processing in a sub-scan direction is carried out independently of the reducing variable magnification processing in a scan direction.

Moreover, even if the two variable magnification processing refer to the same variable magnification processing, Examiner notes that said variable magnification processing in a sub-scan direction is carried out independently of said variable magnification processing in a scan direction according to Kawamoto.

Referring to col. 8, lines 59-67, it states "[t]he data stored in the FIFO memory is read from the memory device 35 at a speed being controlled with the read/write speed control device 62 according to a magnification ratio instructed from the system control device 34." Further, the magnification ratio for the sub-scanning direction is changed by the synchronizing signal for the main scanning direction (col. 7, lines 12-19). However, examiner finds that this synchronizing signal is not related to the magnification processing of the scan-direction. Thus, they are independent.

10. With respect to claim 9, Kawamoto discloses an image processing apparatus provided with a capability of carrying out variable magnification of image data, comprising:

a line memory (FIFO 63) for storing one line worth of data (col. 8, lines 63-64);

a plurality of image forming means (semiconductor laser elements of the laser array unit 14 in col. 6, line 23);

a plurality of output lines (lines connected to the input of the semiconductor laser elements) for connecting the line memory and the plurality of image forming means;

a plurality of switching means (LED writing head control device 37) for turning the plurality of output lines on or off individually; and

a variable-magnification processing means (enlarging/reducing process 53 in fig. 5) for increasing and decreasing the number of times to turn on the switching means in correspondence to magnification ratio, wherein variable magnification processing in sub-scan direction is carried out independently of variable magnification processing in scan direction (col. 8, line 59 – col. 9, line 6 & col. 9, line 7-12).

Note that the enlarging variable magnification processing in a sub-scan direction is carried out independently of the reducing variable magnification processing in a scan direction.

Moreover, even if the two variable magnification processing refer to the same variable magnification processing, Examiner notes that said variable magnification processing in a sub-scan direction is carried out independently of said variable magnification processing in a scan direction according to Kawamoto.

Referring to col. 8, lines 59-67, it states "[t]he data stored in the FIFO memory is read from the memory device 35 at a speed being controlled with the read/write speed control device 62 according to a magnification ratio instructed from the system control device 34." Further, the magnification ratio for the sub-scanning direction is changed by the synchronizing signal for the main scanning direction (col. 7, lines 12-19). However, examiner finds that this synchronizing signal is not related to the magnification processing of the scan-direction. Thus, they are independent.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAN S. PARK whose telephone number is (571) 272-7409. The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on (571) 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chan S. Park
Examiner
Art Unit 2622

csp
July 19, 2005

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